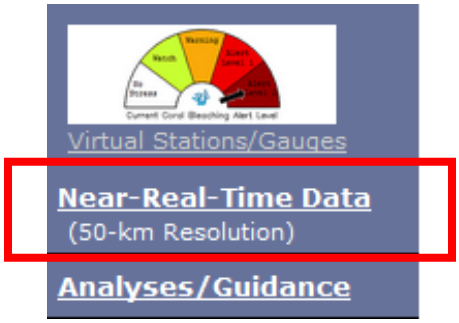
The goal of these hands-on exercises is to reinforce the concepts taught in the online tutorial, using simple examples, and to familiarize users with our website so they will know where to find each of the products. For each exercise, please follow along, starting from the main page of the NOAA Coral Reef Watch (CRW) website: http://coralreefwatch.noaa.gov/satellite/.

Sea Surface Temperature (SST) product exercises

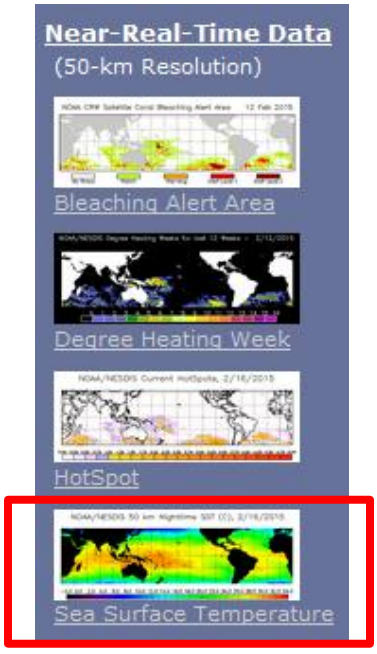
1. What was the temperature around the Galapagos Islands on March 4, 2006?

a. On the front page of the NOAA Coral Reef Watch (CRW) website, look for the blue navigation bar on the left-hand side. Scroll down the blue navigation bar and click on the link for **Near-Real-Time Data (50-km Resolution)**.

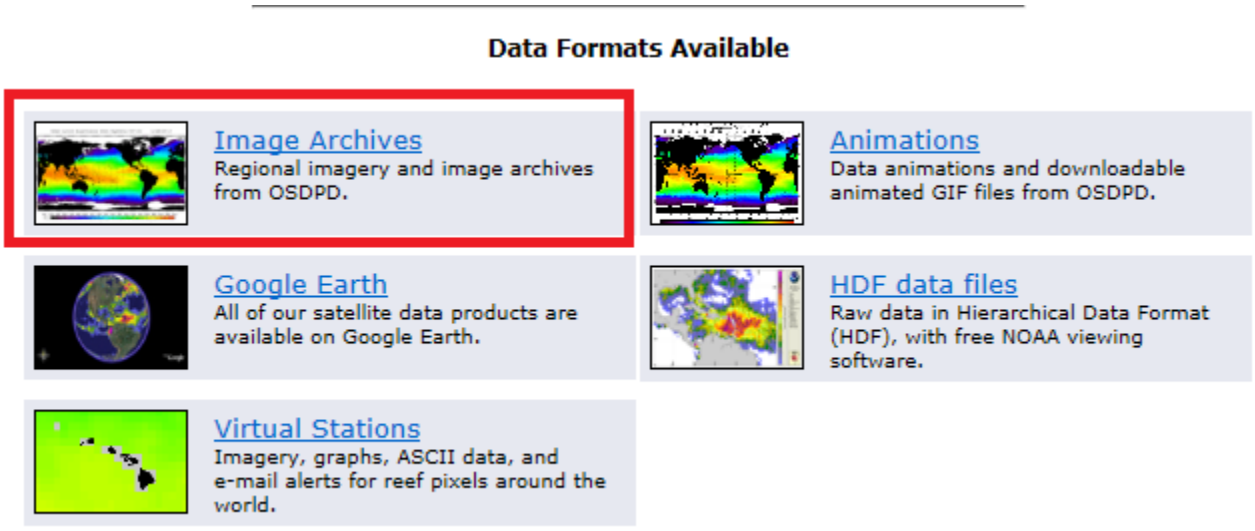


b. This will take you to the new home page for the 50-km products (http://coralreefwatch.noaa.gov/satellite/index_50.php), which includes CRW's operational products, images, animations, datasets, and more.

c. Click on the fourth product in the 50-km navigation bar: **Sea Surface Temperature**.

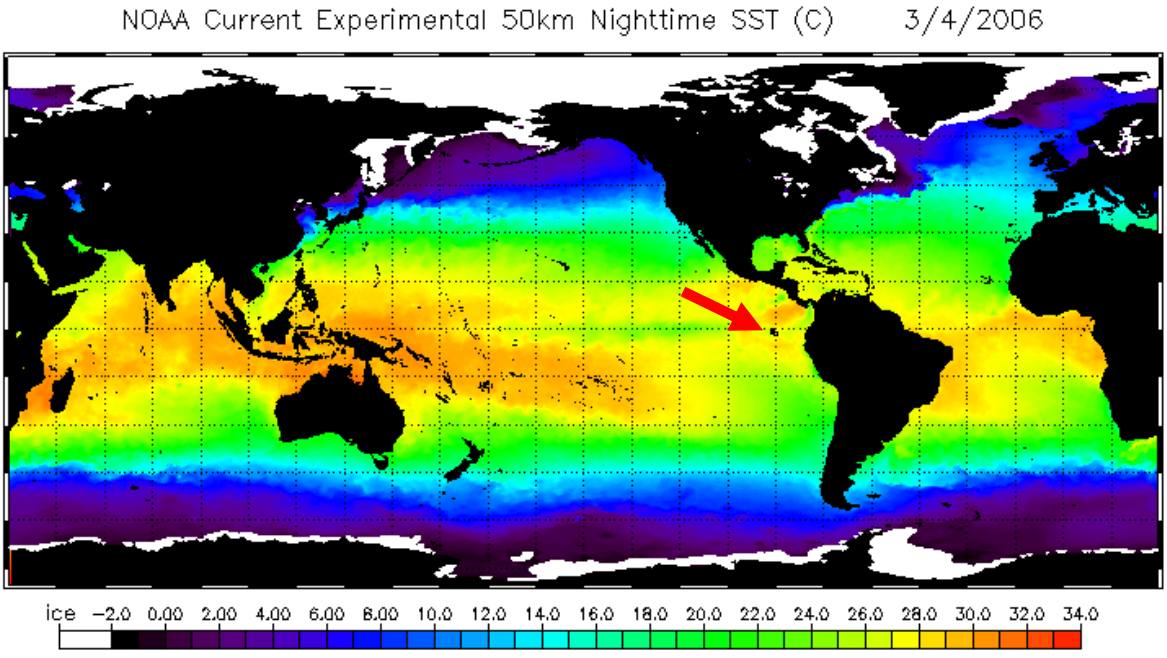


d. This takes you to this year's page for the 50-km Sea Surface Temperature (SST) product. The image at the top will show the latest global SST; the table underneath links to archived images for the current year. Click on **Image Archives**.



e. Scroll down this page, until you get to the bottom of the archive table. You will see links to previous years; click on **2006 50 km Nighttime SSTs** to navigate to that year.

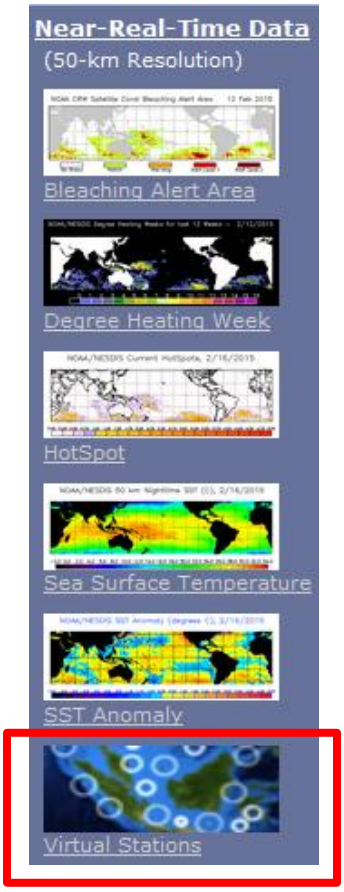
f. Here you will see links to the global images, two per week for the whole year. Find the link for **March 4**, and click to access the global image. Locate the Galapagos Islands, off the west coast of South America.



g. Using the color bar at the bottom of the image, determine the sea surface temperature in the pixels closest to the Galapagos Islands. (*Look at Answer #1 on the answer sheet to see if you got it right!*)

2. Which summer was hotter in the U.S. Virgin Islands: 2004 or 2005? Look at the entire summer season, not just the maximum temperature.

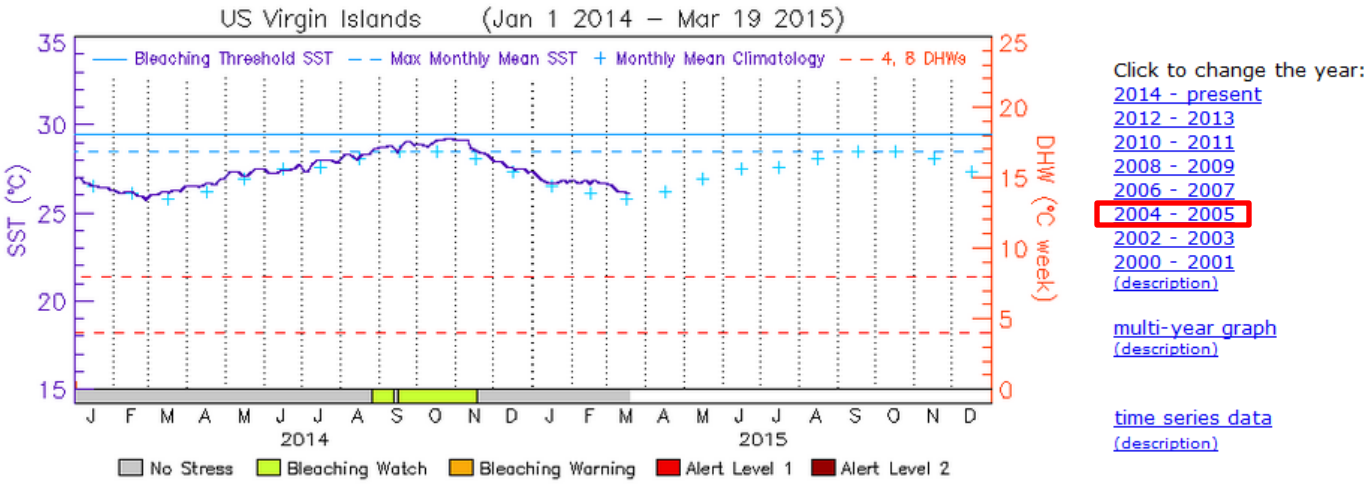
a. Return to CRW's 50-km homepage and click **Virtual Stations** in the 50-km navigation bar; then click on "All 50-km stations and products".

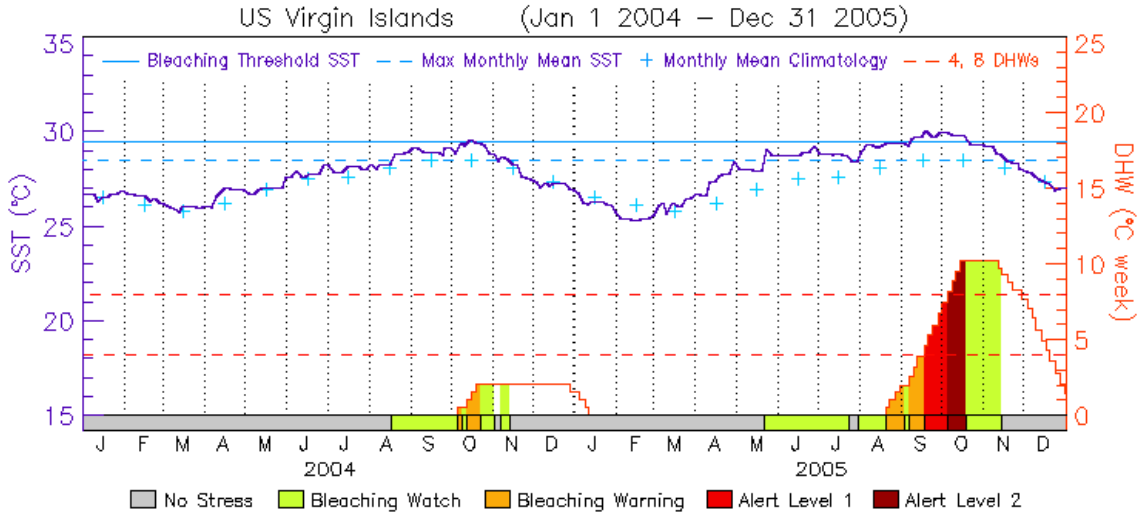


b. This takes you to a page that lists our 227 50-km Virtual Station sites around the world. Find **US Virgin Islands** in the table and click on it.

Puerto Rico	18.0	-67.5	multi-year	current	12-13	10-11	08-09	06-07	04-05	02-03	00-01	data
San Bernardo, Colombia	10.0	-76.0	multi-year	current	12-13	10-11	08-09	06-07	04-05	02-03	00-01	data
Santa Marta, Colombia	11.5	-74.5	multi-year	current	12-13	10-11	08-09	06-07	04-05	02-03	00-01	data
Turks and Caicos	21.5	-72.0	multi-year	current	12-13	10-11	08-09	06-07	04-05	02-03	00-01	data
US Virgin Islands	18.0	-65.0	multi-year	current	12-13	10-11	08-09	06-07	04-05	02-03	00-01	data

c. This page shows time series graphs for the U.S. Virgin Islands satellite pixel, starting in 2000. Find the 2004-2005 graphs, and compare the summer seasons.

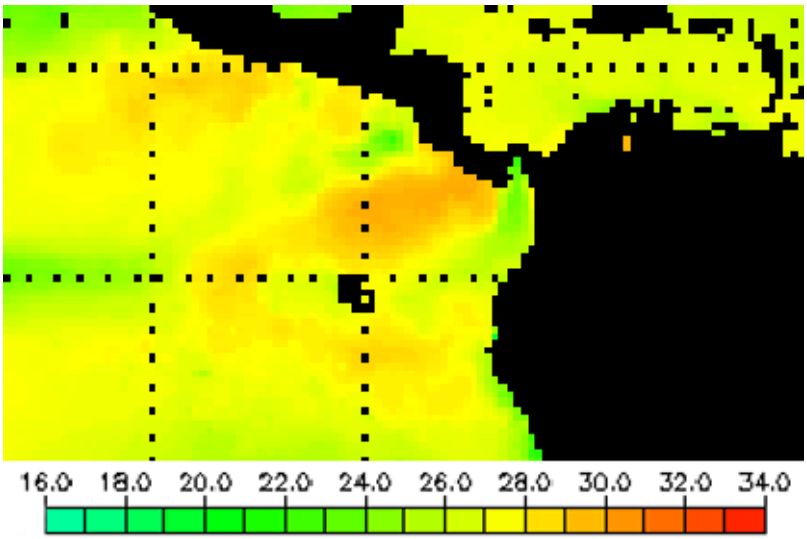




d. Remember that the dark-blue line shows the sea surface temperature (SST) from NOAA satellites. Which year had the warmer summer? (*See #2 on the answer sheet.*)

SST PRODUCT ANSWER SHEET

1. The pixels closest to the Galapagos are pale green to yellow, which indicates temperatures around 27°C.



2. The summer of 2005 was consistently above average throughout the spring and summer – definitely warmer than 2004. In fact, there was significant coral bleaching in the US Virgin Islands in late summer 2005.